

FIGURE 1 - Pervasive Commerce System

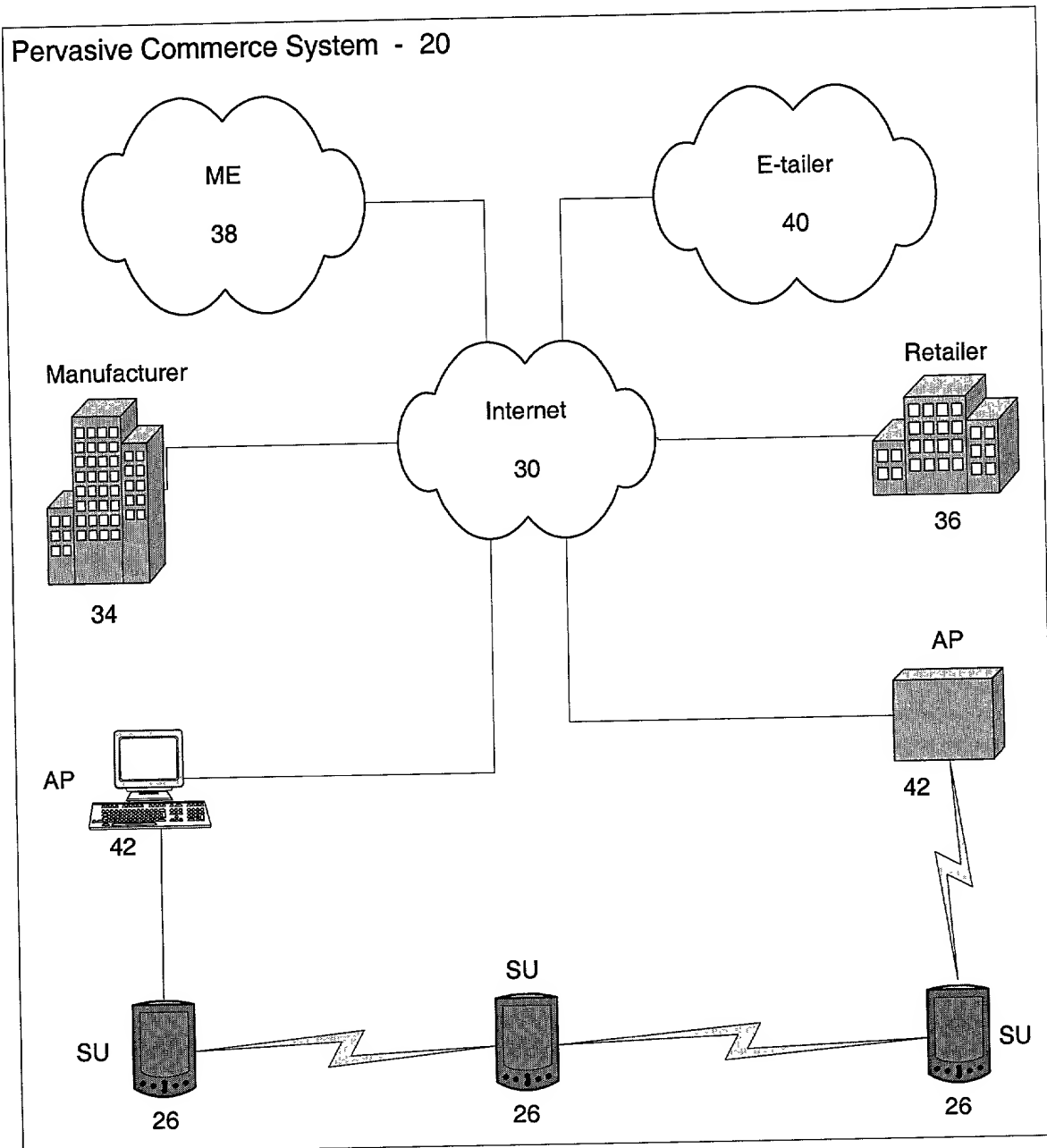


FIGURE 2 - Generic Case Structure

Item Data Block ("I" Block)	
Case Information	ID, version, etc., for the entire case.
Link Information	Relationship to other cases.
Item Information	ID, name, description, etc., for the item.
ME Public Key	Case key or ME key version, used for encryption and whose private key peer is used in "I" and "O" Block signatures.
Distributor Public Key	Assigned to or received from Distributor; private key is used in "D" Block signature.
Block Signature	ME signature of "I" Block

Object Block ("O" Block)	
Object Information	ID, type, description, encoding, size, etc., for the contained digital object.
Object	Image, music, digital asset, etc.
Block Signature	ME signature of "O" Block (via private key peer to ME Public Key).

Distributor Data Block ("D" Block)	
Distributor Information	ID, name, information, etc., for Distributor.
Item Information	Encrypted wholesale price, etc., of item.
Item Options	Selectable features and options of item.
Mutation Rules	Controlling application behavior for case mutation (e.g., expiration date).
Passer Public Key	Assigned to or received from Passer, whose private peer is used in "P" Block signature.
Block Signature	Distributor signature of "D" Block (via private key peer to Distributor Public Key).

Passer Data Block ("P" Block)	
Passer Information	ID, name, etc., of Passer.
Item Information	Sales price, comments, etc., about item.
Receiver Public Key	Assigned to or received from Receiver.
Block Signature	Passer signature of "P" Block (via private key peer to Passer Public Key).

Receiver Data Block ("R" Block)	
Receiver Information	ID, name, etc., of Receiver.
Block Signature	Receiver signature of "R" Block (optional).

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FIGURE 3 - Pervasive Commerce Case Layout

Case

Product Data		
Product Data (product name & description, manufacturer name, address, phone, URL, MSRP, etc)		
ME Public Key Version	Case Version (Template)	Distributor Public Key
Case ID	Case SubID	Product Data Signature (ME)

Distributor Data		
Distributor Info (name, address, phone, URL, promotion, start date, stop date, etc)		
Encrypted [Distributor Price]	Product selectable features	Sales Associate Public Key
Distributor Comments	Mutations	Distributor Data Signature

Sales Associate		
Retail Price	Sales Associate Comments	Consumer Public Key
	Sales Associate ID	Sales Associate Data Signature

Consumer		
Consumer ID	Consumer Comments	Consumer Password (encrypted)
Consumer Account Name	Product Feature Selections	Consumer Data Signature
Credit Card selection	Local Purchase Time/Date	Purchase Price
	Billing Address selection	

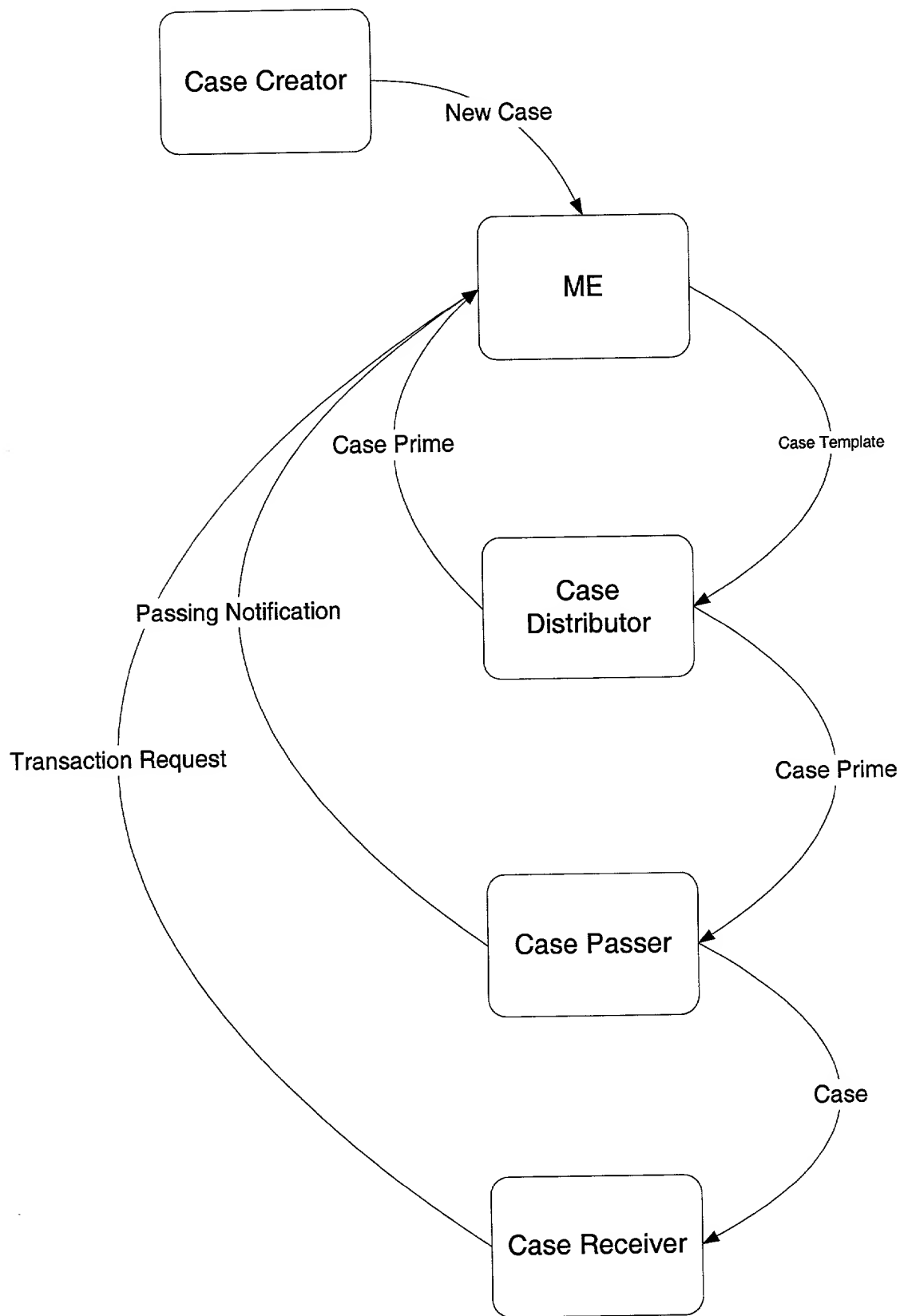
The diagram illustrates the layout of a Pervasive Commerce Case, organized into four main sections: Product Data, Distributor Data, Sales Associate, and Consumer. Each section contains specific fields and signatures, with arrows indicating the flow of data and signatures between the sections.

- Product Data:** Includes fields for Product Data (product name & description, manufacturer name, address, phone, URL, MSRP, etc), ME Public Key Version, Case Version (Template), Distributor Public Key, Case ID, Case SubID, and Product Data Signature (ME).
- Distributor Data:** Includes fields for Distributor Info (name, address, phone, URL, promotion, start date, stop date, etc), Encrypted [Distributor Price], Product selectable features, Sales Associate Public Key, Distributor Comments, Mutations, and Distributor Data Signature.
- Sales Associate:** Includes fields for Retail Price, Sales Associate Comments, Consumer Public Key, Sales Associate ID, and Sales Associate Data Signature.
- Consumer:** Includes fields for Consumer ID, Consumer Comments, Consumer Password (encrypted), Consumer Account Name, Product Feature Selections, Consumer Data Signature, Credit Card selection, Local Purchase Time/Date, Purchase Price, and Billing Address selection.

Arrows indicate the flow of data and signatures between the sections:

- An arrow points from the **Product Data Signature (ME)** field to the **Distributor Data Signature** field.
- An arrow points from the **Distributor Data Signature** field to the **Sales Associate Data Signature** field.
- An arrow points from the **Sales Associate Data Signature** field to the **Consumer Data Signature** field.

FIGURE 4 – Generic Case Flow



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FIGURE 5 - New Case Template Layout

Case

Item Data		
Product Data (product name & description, manufacturer name, address, phone, URL, MSRP, etc)		
ME Public Key Version	Case Version (Template)	Distributor Public Key
Case ID	Case SubID	Product Data Signature (ME)

Dynamic Data
Product Feature Selection Choices

FIGURE 6 - Case Prime Layout

Case

Item Data		
Product Data (product name & description, manufacturer name, address, phone, URL, MSRP, etc)		
ME Public Key Version	Case Version (Template)	Distributor Public Key
Case ID	Case SubID	Product Data Signature (ME)

Digital Object(s)	Object Data	Digital Object Signature (ME)
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Distributor Data		
Distributor Info (name, address, phone, URL, promotion, start date, stop date, etc)		
Encrypted [Distributor Price]	Product selectable features	Sales Associate Public Key
Distributor Comments	Mutations	Distributor Data Signature

Dynamic Data
Distributor Price

FIGURE 7 - Passed Case Layout

Case		
Item Data	Product Data (product name & description, manufacturer name, address, phone, URL, MSRP, etc)	
ME Public Key Version	Case Version (Template)	Distributor Public Key
Case ID	Case SubID	Product Data Signature (ME)
Digital Object(s)	Object Data	Digital Object Signature (ME)
Distributor Data	Distributor Info (name, address, phone, URL, promotion, start date, stop date, etc)	
Encrypted [Distributor Price]	Product selectable features	Sales Associate #1 Public Key
Distributor Comments	Mutations	Distributor Data Signature
Passer (Sales Associate) Data	Sales Associate Comments	Consumer Public Key
Encrypted [Sales Associate Price]	Sales Associate ID	Sales Associate Data Signature
Dynamic Data	Sales Associate Price	

FIGURE 8 - Complete Case Layout

Case		
Item Data		
Product Data (product name & description, manufacturer name, address, phone, URL, MSRP, etc)		
ME Public Key Version	Case Version (Template)	Distributor Public Key
Case ID	Case SubID	Product Data Signature (ME)
Digital Object(s)		
Object Data		Digital Object Signature (ME)
Distributor Data		
Distributor Info (name, address, phone, URL, promotion, start date, stop date, etc)		
Encrypted [Distributor Price]	Product selectable features	Sales Associate #1 Public Key
Distributor Comments	Mutations	Distributor Data Signature
Passer (Sales Associate) Data		
Sales Associate Comments	Consumer Public Key	
Retail Price	Sales Associate ID	Sales Associate Data Signature
Receiver (Consumer) Data		
Consumer Comments		
Consumer ID	Consumer Data Signature	

FIGURE 9 - Consumer Synchronization of PDA with ME

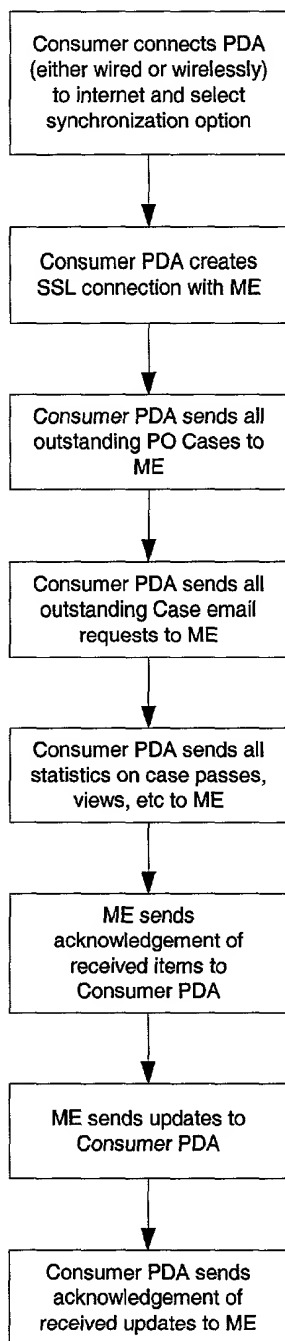
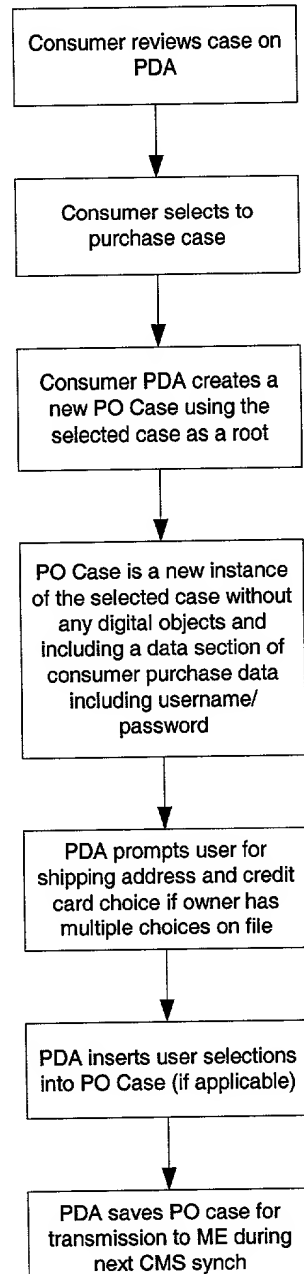


FIGURE 9 - Consumer Synchronization of PDA with ME

FIGURE 10 - Consumer Makes Case-Based Purchase



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FIGURE 11 - Purchase Request Case Layout

Case

Product Data		
Product Data (product name & description, manufacturer name, address, phone, URL, MSRP, etc)		
ME Public Key Version	Case Version (Template)	Distributor Public Key
Case ID	Case SubID	Product Data Signature (ME)

Distributor Data		
Distributor Info (name, address, phone, URL, promotion, start date, stop date, etc)		
Encrypted [Distributor Price]	Product selectable features	Sales Associate Public Key
Distributor Comments	Mutations	Distributor Data Signature

Sales Associate		
Sales Associate Comments		
Retail Price	Sales Associate ID	Consumer Public Key
		Sales Associate Data Signature

Consumer		
Consumer Comments		
Consumer ID	Product Feature Selections	Consumer Password (encrypted)
Consumer Account Name	Local Purchase Time/Date	Consumer Data Signature
Credit Card selection	Billing Address selection	Purchase Price

The diagram illustrates the flow of data signatures between four main sections of the Purchase Request Case Layout. Arrows indicate the following connections:

- From **Product Data Signature (ME)** to **Distributor Data Signature**.
- From **Distributor Data Signature** to **Sales Associate Data Signature**.
- From **Sales Associate Data Signature** to **Consumer Data Signature**.

FIGURE 11 - Purchase Request Case Layout

FIGURE 12 - Sales Associate Passes Case to Sales Associate

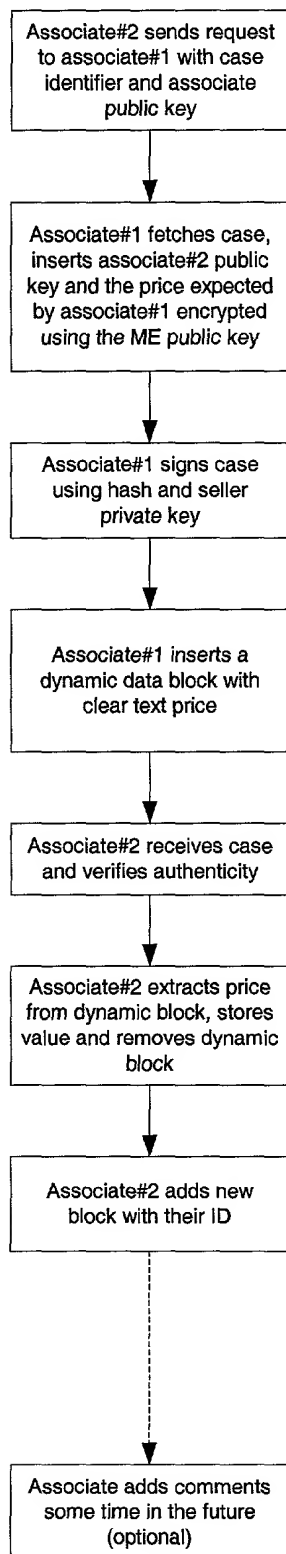


FIGURE 12 - Sales Associate Passes Case to Sales Associate

FIGURE 13 - Sales Associate Passes Case to Consumer

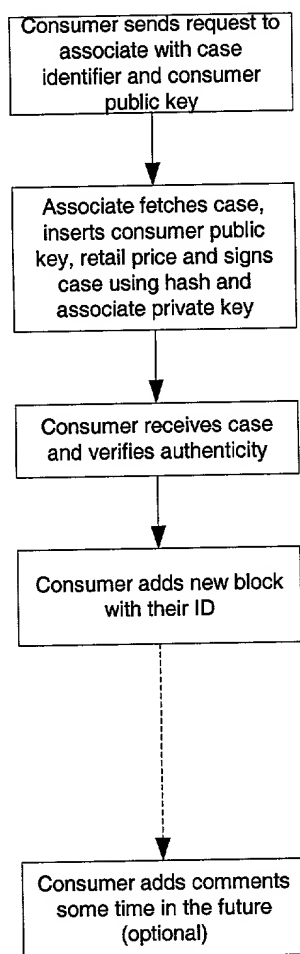


FIGURE 14 - Consumer Passes Case to Consumer

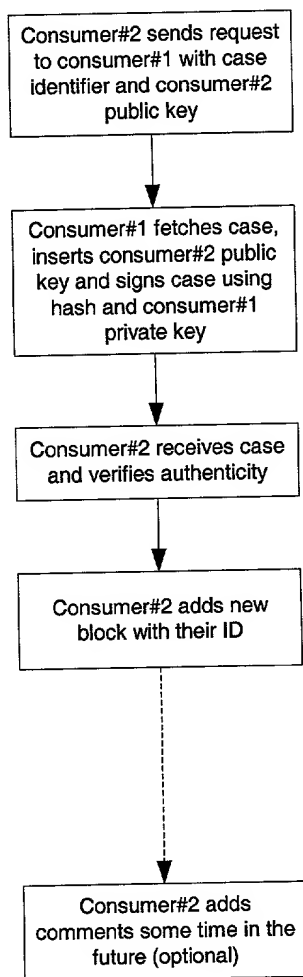
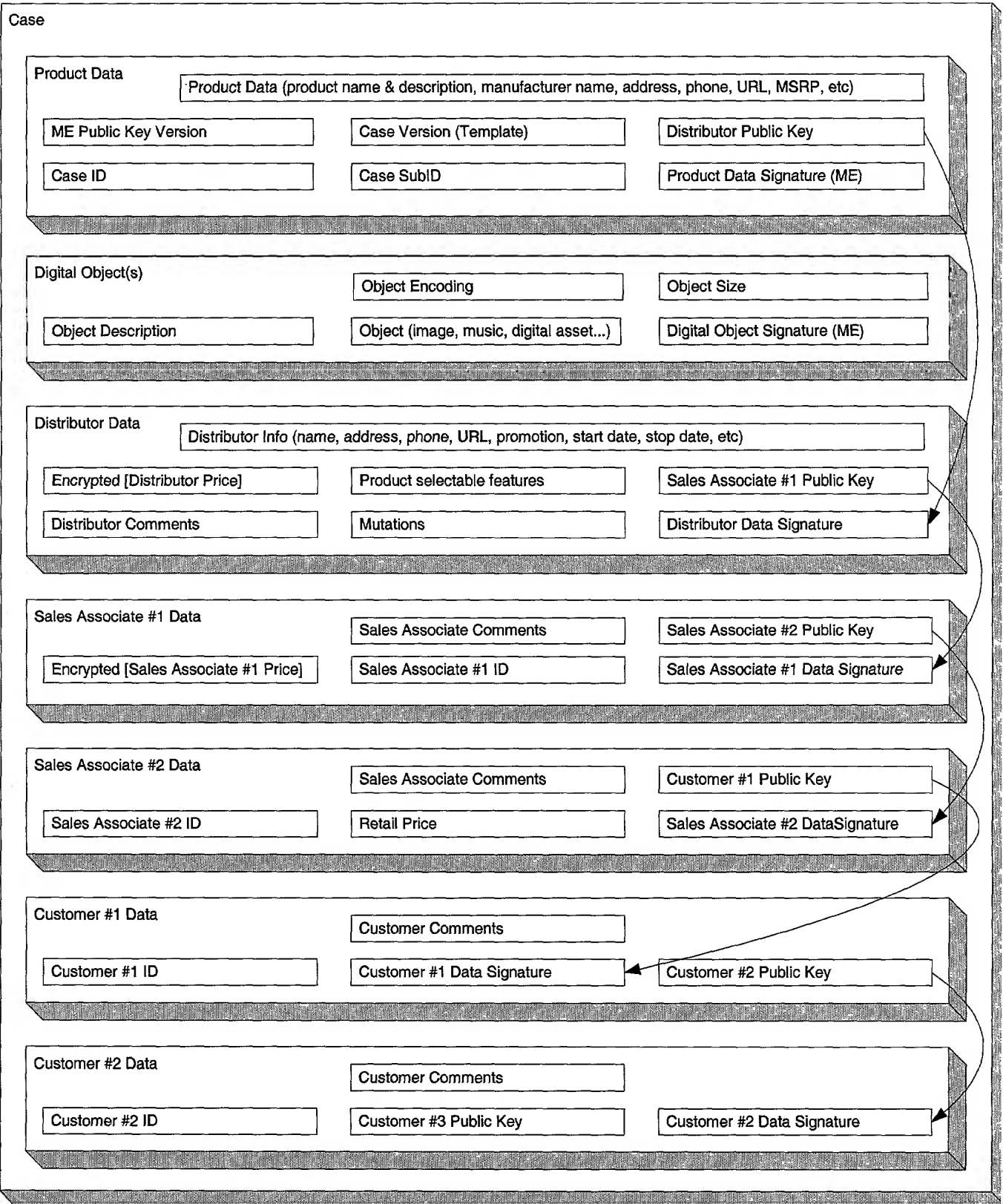


FIGURE 15 - Pervasive Commerce Case Layout



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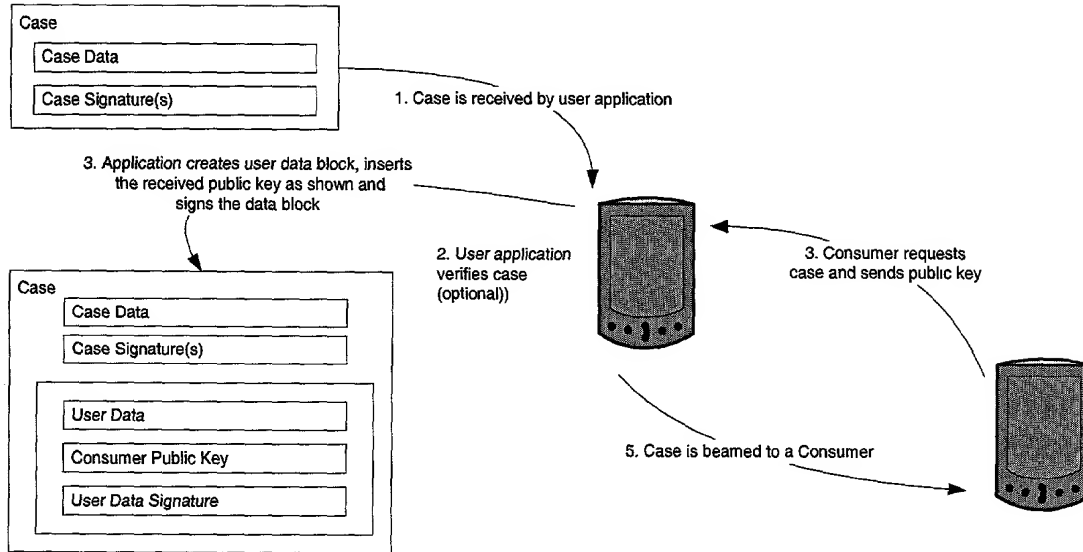


FIGURE 16 – Receiver Selected Key Exchange

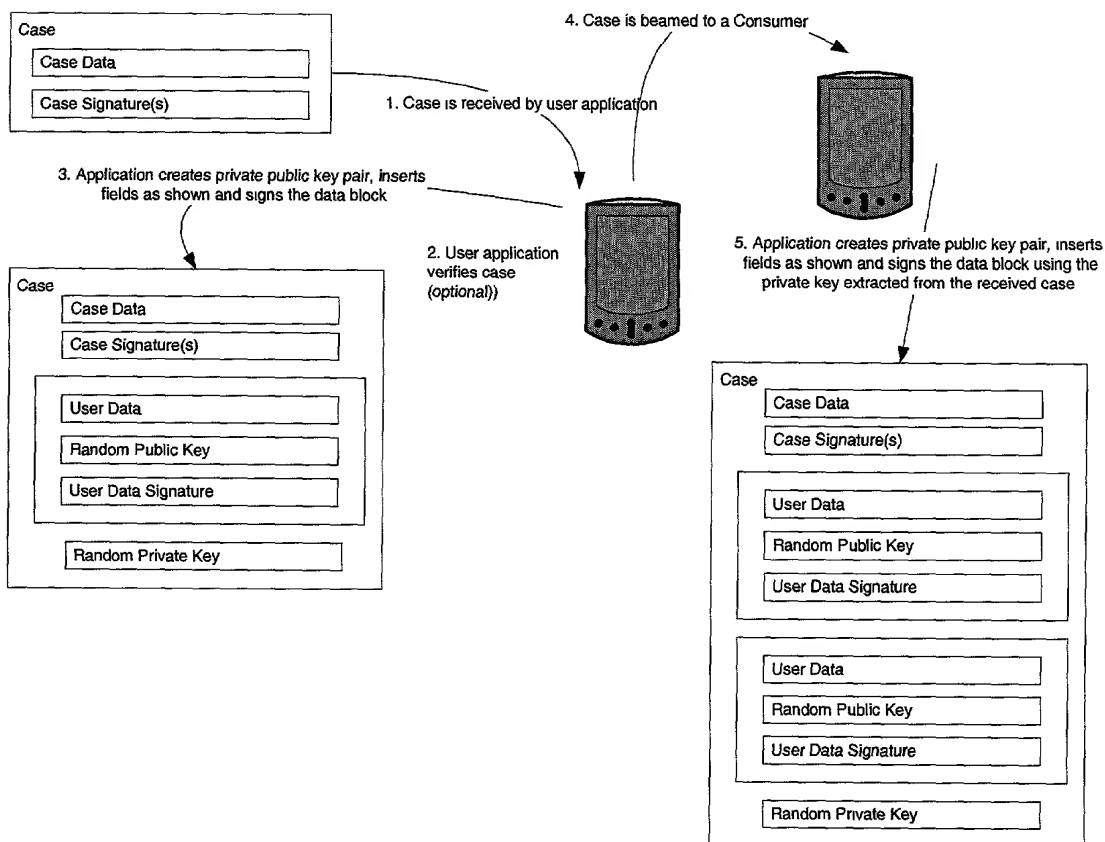


FIGURE 17 – Passer Generated Key Exchange

Digital Object
Object Description (text name and description of the contained digital object)
Object Type (image, video, music clip, music song, music album)
Object Encoding (jpeg, tiff, mpeg, mp3, midi, XrML, zip, pdf)
Object Size (total size of object in bytes)
Object (actual object data)
Digital Object Signature (ME)

FIGURE 18 – DIGITAL OBJECT

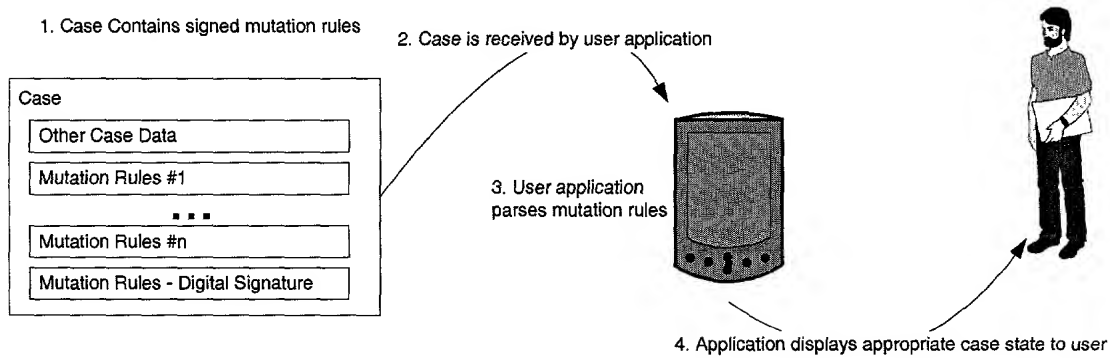


FIGURE 19 – Trusted Case Mutation

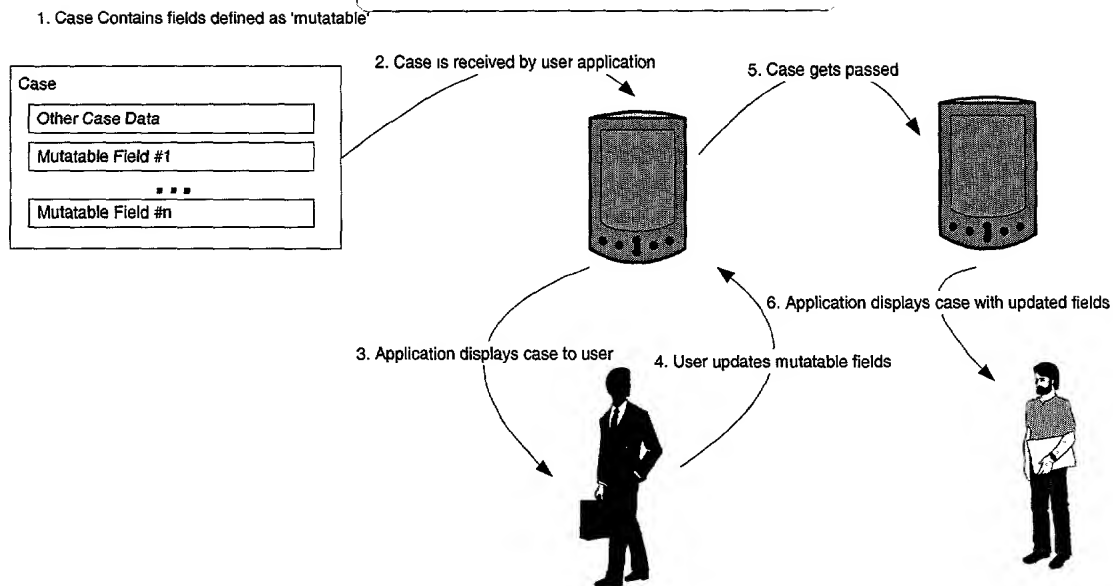


FIGURE 20 – Untrusted Case Mutation

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